

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: FAIL-SAFE

Report Number: P834595

Luminaire Tested: **ORLG-24-4-INS-ASY2-LD4-1LO-50-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834595
Test Lab: INNOVATION CENTER(G2)
Issue Date: 5/16/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: ORLG-24-4-INS-ASY2-LD4-1LO-50-120-EDD
Description: 2FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

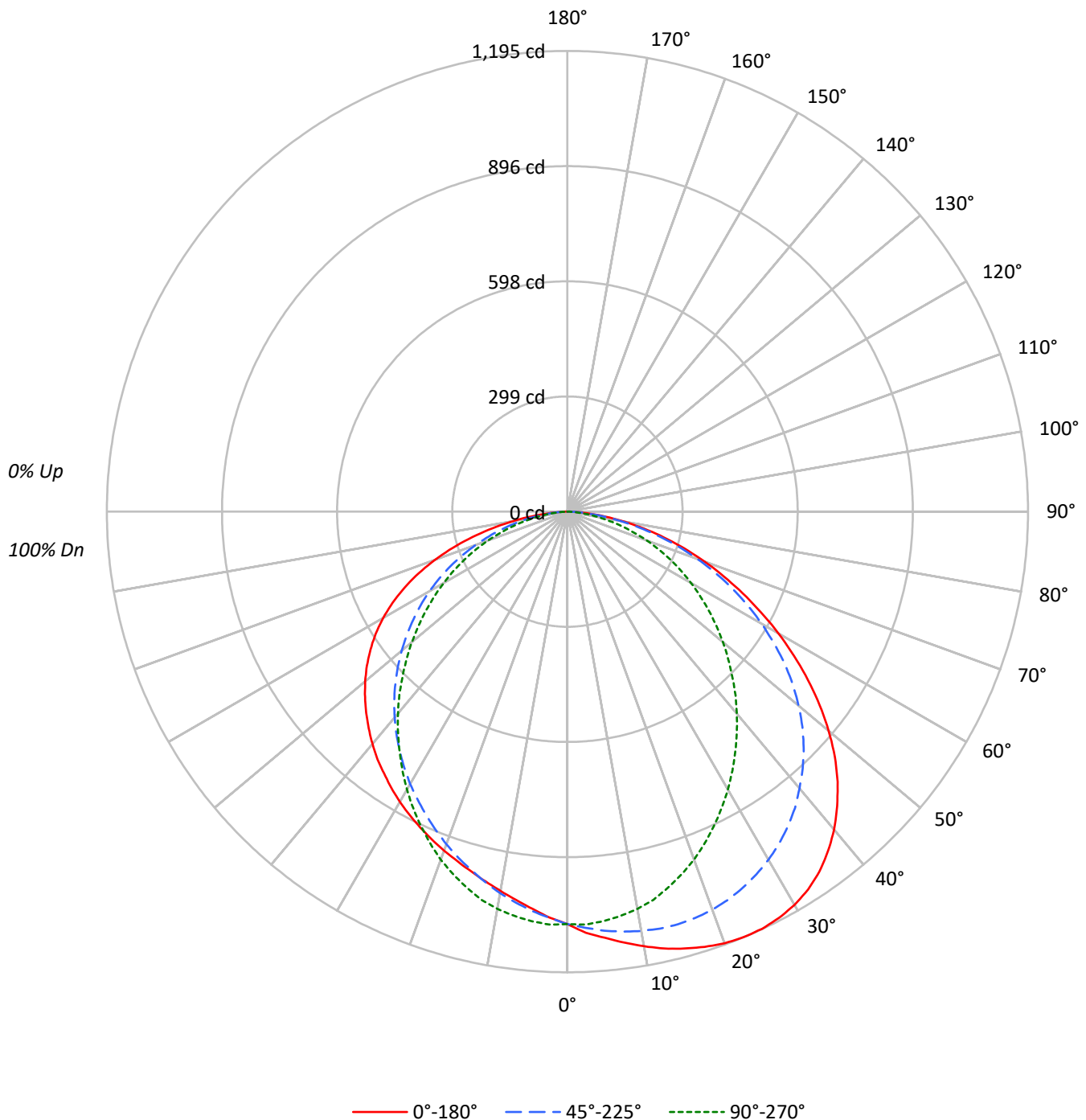
Lumens per Lamp: N/A
Luminaire Lumens: 3146.6 lumens
Efficiency: N/A
Efficacy: 134.5 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 23.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT

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Luminous Intensity Polar Plot



Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20					20					20					20
RC	80				70					50					30					10
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	102	102	100
1	109	104	100	96	106	102	98	94	97	94	91	94	91	88	90	88	86	86	86	84
2	99	90	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72	72	72	70
3	90	79	71	65	87	78	70	64	75	68	63	72	66	62	69	65	61	61	61	58
4	82	70	61	55	80	69	61	54	66	59	53	64	58	53	62	56	52	52	52	50
5	76	63	54	47	73	61	53	47	59	52	46	57	51	46	55	50	45	45	45	43
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	40	40	40	37
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	35	35	33
8	60	46	38	32	59	46	38	32	44	37	32	43	36	31	42	36	31	31	31	29
9	56	43	34	29	55	42	34	29	41	34	29	40	33	28	39	33	28	28	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	26	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	1439	1439	1439
5°	1499	1440	1397
10°	1564	1429	1365
15°	1634	1406	1345
20°	1706	1375	1340
25°	1773	1335	1342
30°	1830	1294	1351
35°	1872	1247	1362
40°	1891	1201	1382
45°	1886	1151	1405
50°	1852	1102	1434
55°	1789	1051	1463
60°	1702	997	1485
65°	1598	936	1484
70°	1487	864	1439
75°	1351	758	1327
80°	1159	623	1120
85°	885	426	769

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	101.5	3.2
10°-20°	293.0	9.3
20°-30°	448.9	14.3
30°-40°	547.8	17.4
40°-50°	572.8	18.2
50°-60°	518.5	16.5
60°-70°	392.7	12.5
70°-80°	218.8	7.0
80°-90°	52.8	1.7
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	843.3	26.8
0°-40°	1391.0	44.2
0°-60°	2482.4	78.9
0°-90°	3146.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3146.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1070	1070	1070	1070	1070	
5°	1110	1091	1066	1040	1035	107
15°	1173	1108	1010	963	966	333
25°	1194	1077	900	868	904	551
35°	1140	997	759	758	829	712
45°	991	867	605	631	738	763
55°	763	689	448	488	624	681
65°	502	472	294	334	466	498
75°	260	245	146	174	255	276
85°	57	50	28	37	50	69
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
0°	1069.7	1069.7	1069.7	1069.7	1069.7	1069.7	1069.7	1069.7	1069.7	1069.7	1069.7
2.5°	1093.3	1088.2	1084.0	1085.6	1086.6	1083.3	1080.5	1080.9	1078.1	1083.5	1070.9
5°	1109.5	1104.8	1099.9	1101.7	1099.9	1095.0	1091.0	1089.8	1082.3	1085.4	1072.5
7.5°	1127.5	1122.3	1115.1	1117.2	1113.2	1104.1	1098.9	1095.9	1084.4	1084.7	1070.4
10°	1144.8	1140.3	1130.5	1131.9	1124.7	1112.5	1104.3	1100.1	1084.0	1081.6	1066.9
12.5°	1160.9	1154.8	1144.3	1145.0	1134.5	1118.4	1107.8	1101.7	1080.7	1073.7	1059.2
15°	1173.3	1167.5	1154.8	1154.6	1141.0	1120.0	1108.1	1099.6	1073.0	1062.0	1046.8
17.5°	1183.8	1178.4	1162.8	1162.3	1145.9	1119.3	1105.0	1094.5	1061.8	1048.2	1031.4
20°	1191.3	1185.9	1168.4	1166.8	1147.1	1115.8	1098.7	1085.4	1047.0	1030.9	1012.2
22.5°	1194.8	1189.4	1169.6	1167.2	1144.3	1108.8	1089.6	1073.9	1030.2	1009.2	989.8
25°	1194.1	1189.0	1166.5	1164.2	1138.9	1098.2	1076.7	1058.7	1008.9	984.1	965.0
27.5°	1188.3	1184.3	1160.7	1157.6	1129.1	1084.0	1061.1	1041.2	985.3	957.7	936.9
30°	1178.2	1175.2	1150.1	1147.3	1116.9	1068.3	1042.8	1019.9	959.8	928.7	907.7
32.5°	1162.1	1159.3	1134.0	1131.4	1100.6	1048.2	1021.6	997.9	932.0	897.6	876.6
35°	1139.9	1138.2	1113.7	1110.9	1079.5	1025.3	997.0	971.0	903.0	864.2	844.1
37.5°	1110.6	1110.6	1087.0	1084.0	1053.3	997.2	969.4	941.8	870.3	829.1	809.2
40°	1076.7	1079.8	1055.7	1052.6	1023.0	967.1	936.7	907.7	835.0	792.2	772.8
42.5°	1036.0	1038.9	1018.7	1015.9	988.1	932.2	903.9	872.4	798.0	754.5	734.4
45°	991.2	994.9	976.9	974.8	948.8	894.1	867.0	835.0	759.4	715.2	695.6
47.5°	941.1	946.0	930.4	929.2	905.1	855.1	826.8	794.3	719.0	674.3	655.9
50°	885.0	892.0	879.2	879.2	857.6	807.8	783.3	750.8	676.9	632.2	614.0
52.5°	824.9	833.8	824.2	824.4	806.9	762.2	736.8	705.0	632.9	589.0	572.2
55°	762.7	771.4	765.3	766.2	752.4	711.7	688.6	657.0	588.1	545.3	529.4
57.5°	697.7	707.1	703.1	705.0	695.4	658.9	634.8	607.2	541.8	499.4	485.9
60°	632.5	641.4	639.3	641.8	635.8	604.2	582.2	553.7	495.2	454.5	442.6
62.5°	566.5	574.7	574.3	577.1	573.8	547.6	528.0	503.6	447.1	409.6	398.7
65°	502.0	509.0	508.6	511.6	510.9	489.8	472.1	449.9	398.9	364.5	354.9
67.5°	439.3	445.2	443.6	447.1	448.0	431.2	415.7	395.9	353.1	319.6	311.4
70°	378.1	382.1	380.0	382.3	384.4	371.8	358.7	341.1	304.2	274.7	268.0
72.5°	318.0	320.8	317.5	319.9	321.7	312.6	301.9	286.7	256.0	230.5	224.9
75°	259.8	263.7	257.0	259.3	260.7	251.6	245.3	232.9	206.5	186.8	183.1
77.5°	203.4	205.8	202.0	201.1	202.0	195.5	190.6	181.0	161.1	145.0	142.6
80°	149.6	151.0	147.3	146.4	147.1	142.4	138.7	131.6	117.6	105.5	104.5
82.5°	100.3	101.0	97.7	96.8	97.3	95.9	91.4	86.5	80.0	69.7	69.4
85°	57.3	57.3	54.9	54.0	54.5	52.1	50.5	47.9	45.4	38.3	38.8
87.5°	21.0	21.0	19.9	19.6	22.0	19.4	18.7	17.5	18.2	14.5	15.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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CANDELA DISTRIBUTION (continued):

	80°	90°	100°	110°	112.5°	120°	130°	135°	140°	150°	157.5°
0°	1069.7	1069.7	1069.7	1069.7	1069.7	1069.7	1069.7	1069.7	1069.7	1069.7	1069.7
2.5°	1074.4	1072.1	1070.0	1062.7	1065.7	1058.3	1057.8	1055.0	1052.9	1048.9	1054.1
5°	1070.9	1066.2	1060.1	1051.5	1054.1	1045.2	1043.3	1040.0	1037.2	1032.1	1036.0
7.5°	1065.3	1057.6	1048.0	1037.0	1040.5	1029.5	1026.7	1023.2	1020.8	1014.8	1018.3
10°	1057.1	1046.1	1034.9	1021.6	1024.1	1012.2	1008.7	1004.9	1002.8	997.5	1001.0
12.5°	1044.5	1031.1	1015.9	1001.4	1004.2	993.0	988.3	984.4	983.7	979.2	983.4
15°	1028.1	1009.6	994.0	978.5	981.8	968.7	966.6	962.6	963.8	960.8	965.9
17.5°	1007.3	986.0	968.9	952.3	955.6	944.6	943.0	941.1	942.3	941.8	947.4
20°	983.9	960.5	940.9	924.5	926.4	917.7	918.4	918.0	920.3	922.9	930.6
22.5°	957.5	931.1	910.5	893.7	896.5	889.0	892.2	893.2	897.2	903.0	912.8
25°	927.8	899.5	878.0	862.1	864.7	859.7	865.4	867.7	874.0	883.8	893.9
27.5°	896.7	866.8	843.8	828.7	833.6	828.7	837.1	841.7	851.3	862.1	874.5
30°	863.7	832.6	809.0	795.4	800.1	795.7	809.2	815.6	825.1	839.9	854.6
32.5°	829.1	796.4	773.2	762.7	766.0	765.3	780.5	787.5	800.4	817.2	832.9
35°	793.6	759.4	736.1	727.2	731.1	732.1	750.3	758.5	772.5	792.9	809.7
37.5°	756.9	722.0	699.1	691.9	695.4	698.9	720.2	728.3	744.2	766.5	784.9
40°	718.8	683.9	661.5	655.6	659.1	662.9	686.0	697.2	714.5	738.6	758.7
42.5°	680.2	645.3	623.6	619.4	622.9	630.1	654.7	665.2	683.4	710.1	732.3
45°	640.9	604.7	585.7	582.4	586.2	594.6	618.7	631.3	650.7	679.9	703.8
47.5°	601.1	565.8	547.8	545.7	549.5	558.8	585.5	596.9	617.5	648.6	674.3
50°	560.9	526.6	509.3	508.6	512.1	522.1	547.6	561.2	582.4	617.3	643.7
52.5°	520.2	487.3	471.6	471.6	474.9	485.2	510.9	524.9	546.9	583.6	612.8
55°	479.6	448.2	433.3	434.4	439.1	448.0	473.0	487.7	510.0	548.1	578.9
57.5°	438.9	409.2	395.6	397.3	401.7	410.6	435.1	451.7	471.8	511.4	542.9
60°	398.7	370.6	358.7	360.5	364.5	373.4	398.9	413.2	433.3	473.5	505.0
62.5°	358.0	332.5	321.3	323.6	327.1	336.0	360.1	373.9	393.7	433.3	465.1
65°	317.8	294.1	284.6	286.9	290.2	298.4	321.0	334.4	353.3	391.9	422.3
67.5°	278.0	256.5	248.5	250.9	253.5	261.2	279.9	294.4	312.1	348.9	377.6
70°	238.7	219.6	212.5	214.9	217.2	224.2	240.6	253.9	270.3	304.0	330.6
72.5°	199.9	181.2	177.7	179.8	181.7	187.8	203.4	213.9	228.2	258.1	281.0
75°	162.0	145.9	143.6	145.7	147.3	152.0	165.1	174.2	186.1	212.1	230.8
77.5°	125.6	112.0	111.1	112.7	114.3	117.6	127.9	137.5	146.8	166.0	182.6
80°	91.4	80.4	80.4	82.1	81.6	85.6	92.8	100.5	107.3	121.1	133.3
82.5°	60.3	51.7	52.8	54.0	54.7	56.4	60.8	66.6	70.8	79.3	87.2
85°	33.4	27.6	28.8	29.7	29.2	31.1	33.4	36.9	39.0	43.0	47.2
87.5°	12.4	10.3	10.5	11.2	11.7	12.6	12.6	14.7	15.0	15.4	16.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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CANDELA DISTRIBUTION (continued):

	160°	170°	180°
0°	1069.7	1069.7	1069.7
2.5°	1044.2	1049.8	1054.1
5°	1026.2	1030.9	1034.6
7.5°	1008.7	1012.9	1016.2
10°	992.1	996.8	999.1
12.5°	975.0	980.4	982.3
15°	958.2	963.6	965.9
17.5°	940.9	947.9	950.5
20°	924.7	933.6	935.7
22.5°	908.4	917.5	920.1
25°	890.6	901.4	903.9
27.5°	871.7	884.5	887.1
30°	852.7	866.8	869.3
32.5°	832.4	847.6	849.9
35°	811.1	826.3	829.1
37.5°	787.5	804.1	809.7
40°	762.9	781.0	786.8
42.5°	737.2	756.9	762.9
45°	709.6	731.1	738.2
47.5°	681.8	706.1	712.2
50°	651.7	677.6	684.9
52.5°	620.1	648.4	655.6
55°	587.4	615.9	623.8
57.5°	551.8	581.3	589.7
60°	514.6	544.1	552.0
62.5°	476.5	503.2	510.9
65°	434.0	459.0	466.0
67.5°	388.8	411.8	417.6
70°	340.9	360.8	365.9
72.5°	290.9	304.7	311.4
75°	239.2	250.2	255.3
77.5°	187.3	195.0	199.2
80°	136.5	141.0	144.5
82.5°	89.3	91.2	93.8
85°	48.2	48.2	49.8
87.5°	16.4	15.7	16.4
90°	0.0	0.0	0.0

(END OF REPORT)